

PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No. PCT/RO 98/00021

25 November 1998

International Filing Date (25.11.98)

STATE OFFICE FOR INVENTIONS AND TRADEMARKS

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference 6438
(if desired) (12 characters maximum)

Box No. I TITLE OF INVENTION THREE DIMENSIONAL OPTICAL MEMORY WITH FLUORESCENT PHOTSENSITIVE MATERIAL

Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

PAVEL EUGEN
Calea Mosilor nr.274, ap.34, sector 2,
Bucuresti, ROMANIA,
Cod postal 73252

☒ This person is also inventor.

Telephone No.
401 2118478

Facsimile No.

Teleprinter No.

State (that is, country) of nationality: RO

State (that is, country) of residence: RO

This person is applicant for the purposes of:

☒ all designated States

☐ all designated States except the United States of America

☐ the United States of America only

☐ the States indicated in the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

PAVEL EUGEN.
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Bucuresti, ROMANIA,
Cod postal 73252

This person is:

☐ applicant only

☒ applicant and inventor

☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality: RO

State (that is, country) of residence: RO

This person is applicant for the purposes of:

☒ all designated States

☐ all designated States except the United States of America

☐ the United States of America only

☐ the States indicated in the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on a continuation sheet.

Box No. IV AGENT OR COMMON REPRESENTATIVE: OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

☒ agent

☐ common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

ROMINVENT S.A.
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Cod postal 71128

Telephone No.
401 2115320

Facsimile No.
401 2115300

Teleprinter No.

☐ Address for correspondence: Mark this check-box where no agent or common representative has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

See Notes to the request.

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

Regional Patent

- ☒ **AP** **ARIPO Patent:** GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☒ **EA** **Eurasian Patent:** AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ **EP** **European Patent:** AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ **OA** **OAPI Patent:** BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)

National Patent (if other kind of protection or treatment desired, specify on dotted line):

- | | | |
|-------------------------------------|-----------|---|
| <input checked="" type="checkbox"/> | AL | Albania |
| <input checked="" type="checkbox"/> | AM | Armenia |
| <input checked="" type="checkbox"/> | AT | Austria |
| <input checked="" type="checkbox"/> | AU | Australia |
| <input checked="" type="checkbox"/> | AZ | Azerbaijan |
| <input checked="" type="checkbox"/> | BA | Bosnia and Herzegovina |
| <input checked="" type="checkbox"/> | BB | Barbados |
| <input checked="" type="checkbox"/> | BG | Bulgaria |
| <input checked="" type="checkbox"/> | BR | Brazil |
| <input checked="" type="checkbox"/> | BY | Belarus |
| <input checked="" type="checkbox"/> | CA | Canada |
| <input checked="" type="checkbox"/> | CH and LI | Switzerland and Liechtenstein |
| <input checked="" type="checkbox"/> | CN | China |
| <input checked="" type="checkbox"/> | CU | Cuba |
| <input checked="" type="checkbox"/> | CZ | Czech Republic |
| <input checked="" type="checkbox"/> | DE | Germany |
| <input checked="" type="checkbox"/> | DK | Denmark |
| <input checked="" type="checkbox"/> | EE | Estonia |
| <input checked="" type="checkbox"/> | ES | Spain |
| <input checked="" type="checkbox"/> | FI | Finland |
| <input checked="" type="checkbox"/> | GB | United Kingdom |
| <input checked="" type="checkbox"/> | GE | Georgia |
| <input checked="" type="checkbox"/> | GH | Ghana |
| <input checked="" type="checkbox"/> | GM | Gambia |
| <input checked="" type="checkbox"/> | GW | Guinea-Bissau |
| <input checked="" type="checkbox"/> | HR | Croatia |
| <input checked="" type="checkbox"/> | HU | Hungary |
| <input checked="" type="checkbox"/> | ID | Indonesia |
| <input checked="" type="checkbox"/> | IL | Israel |
| <input checked="" type="checkbox"/> | IS | Iceland |
| <input checked="" type="checkbox"/> | JP | Japan |
| <input checked="" type="checkbox"/> | KE | Kenya |
| <input checked="" type="checkbox"/> | KG | Kyrgyzstan |
| <input checked="" type="checkbox"/> | KP | Democratic People's Republic of Korea |
| <input checked="" type="checkbox"/> | KR | Republic of Korea |
| <input checked="" type="checkbox"/> | KZ | Kazakhstan |
| <input checked="" type="checkbox"/> | LC | Saint Lucia |
| <input checked="" type="checkbox"/> | LK | Sri Lanka |
| <input checked="" type="checkbox"/> | LR | Liberia |
| <input checked="" type="checkbox"/> | LS | Lesotho |
| <input checked="" type="checkbox"/> | LT | Lithuania |
| <input checked="" type="checkbox"/> | LU | Luxembourg |
| <input checked="" type="checkbox"/> | LV | Latvia |
| <input checked="" type="checkbox"/> | MD | Republic of Moldova |
| <input checked="" type="checkbox"/> | MG | Madagascar |
| <input checked="" type="checkbox"/> | MK | The former Yugoslav Republic of Macedonia |
| <input checked="" type="checkbox"/> | MN | Mongolia |
| <input checked="" type="checkbox"/> | MW | Malawi |
| <input checked="" type="checkbox"/> | MX | Mexico |
| <input checked="" type="checkbox"/> | NO | Norway |
| <input checked="" type="checkbox"/> | NZ | New Zealand |
| <input checked="" type="checkbox"/> | PL | Poland |
| <input checked="" type="checkbox"/> | PT | Portugal |
| <input checked="" type="checkbox"/> | RO | Romania |
| <input checked="" type="checkbox"/> | RU | Russian Federation |
| <input checked="" type="checkbox"/> | SD | Sudan |
| <input checked="" type="checkbox"/> | SE | Sweden |
| <input checked="" type="checkbox"/> | SG | Singapore |
| <input checked="" type="checkbox"/> | SI | Slovenia |
| <input checked="" type="checkbox"/> | SK | Slovakia |
| <input checked="" type="checkbox"/> | SL | Sierra Leone |
| <input checked="" type="checkbox"/> | TJ | Tajikistan |
| <input checked="" type="checkbox"/> | TM | Turkmenistan |
| <input checked="" type="checkbox"/> | TR | Turkey |
| <input checked="" type="checkbox"/> | TT | Trinidad and Tobago |
| <input checked="" type="checkbox"/> | UA | Ukraine |
| <input checked="" type="checkbox"/> | UG | Uganda |
| <input type="checkbox"/> | US | United States of America |
| <input type="checkbox"/> | UZ | Uzbekistan |
| <input checked="" type="checkbox"/> | VN | Viet Nam |
| <input checked="" type="checkbox"/> | YU | Yugoslavia |
| <input checked="" type="checkbox"/> | ZW | Zimbabwe |
- shows reserved for designating States (for the purpose of the patent) which have become party to the FCET since the date of this sheet.

Precautionary Designation Statement: In addition to the designation made above, the applicant also makes under Rule 4.5.2.1(a) designations which would be permitted under the FC (except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement). The applicant declares that these additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. *(Confirmation of a designation is a result of the filing of a notice specifying that designation and a payment of the designation and confirmation fee.)* The applicant agrees to watch the receiving Office within the 15-month time limit.

Box No. VI PRIORITY CLAIM		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1)				
item (2)				
item (3)				

☐ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s):

* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):	Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):
ISA / E:	Date (day/month/year) Number Country (or regional Office)


Box No. VIII CHECK LIST: LANGUAGE OF FILING

This international application contains the following number of sheets: request : 3 description (excluding sequence listing part) : 32 claims : 22 abstract : 1 drawings : 5 sequence listing part of description : Total number of sheets : 62	This international application is accompanied by the item(s) marked below: 1. <input checked="" type="checkbox"/> fee calculation sheet 2. <input checked="" type="checkbox"/> separate signed power of attorney 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: 4. <input type="checkbox"/> statement explaining lack of signature 5. <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s): 6. <input checked="" type="checkbox"/> translation of international application into (language): English 7. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material 8. <input type="checkbox"/> nucleotide and/or amino acid sequence listing in computer readable form 9. <input checked="" type="checkbox"/> other (specify): Request for reduction EPO's fees
Figure of the drawings which should accompany the abstract:	Language of filing of the international application: English

Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

ROMINVENT S.A.
Lucian E. ESCOBAR
Manager



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1. Date of actual receipt of the purported international application.	2. Drawings: <input type="checkbox"/> received <input type="checkbox"/> not received
3. Corrected date of actual receipt due to later than timely received papers or drawings completing the purported international application.	
4. Date of timely receipt of the required corrections under PCT Article 17(2).	
5. International Searching Authority (if two or more are competent): ISA	<input type="checkbox"/> Transmittal of search copy delayed until search fee is paid

Date of receipt of the record copy by the International Bureau:	For International Bureau use only
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21571

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6438	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/RO 98/ 00021	International filing date (day/month/year) 25/11/1998	(Earliest) Priority Date (day/month/year)
Applicant PAVEL, Eugen et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☒ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1 _____

☐ None of the figures.

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 G11B7/24 G11B7/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G11B G11C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 268 862 A (RENTZEPIS PETER M) 7 December 1993 (1993-12-07)	1, 2, 4, 8, 9, 13-15, 17, 22, 33-35, 37, 42, 53-55, 57, 67, 69, 71, 77
A	the whole document	11, 12, 24, 25, 44, 45, 58, 59, 79, 80

	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

20 August 1999

Date of mailing of the international search report

08/09/1999

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Annibal, P

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	US 5 472 759 A (CHEN WENPENG ET AL) 5 December 1995 (1995-12-05)	1,2,4,8, 9,13-15, 17,22, 33-35, 37,42, 53-55, 57, 67-69, 71,77
A	the whole document	
A	HIRAO, QUI & SHIMIZUGAWA: "Photostimulable Luminescent Glasses as a Novel Material for Optical Memory" JAPANESE JOURNAL OF APPLIED PHYSICS, vol. 37, no. 4b, April 1998 (1998-04), pages 2259-2262, XP002112860 the whole document	26-32, 46-52, 60-66, 81-94
A	US 5 478 498 A (KODAMA NOBUHIRO ET AL) 26 December 1995 (1995-12-26)	26-32, 46-52, 60-66, 81-94
	the whole document	

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5268862	A	07-12-1993	US 5325324 A	28-06-1994
US 5472759	A	05-12-1995	AU 1432695 A	03-07-1995
			CA 2179177 A	22-06-1995
			EP 0734574 A	02-10-1996
			WO 9516994 A	22-06-1995
US 5478498	A	26-12-1995	JP 7157395 A	20-06-1995
			JP 7157396 A	20-06-1995
			JP 7172991 A	11-07-1995
			JP 7172992 A	11-07-1995
			JP 7215797 A	15-08-1995
			JP 7277892 A	24-10-1995
			DE 4443001 A	08-06-1995
			JP 7232996 A	05-09-1995
			JP 7232995 A	05-09-1995
			JP 7257997 A	09-10-1995